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**REMARKS**

Claims 2-18, 20-32, 34 and 35 are currently pending in the subject application and are presently under consideration. A version of all claims is shown at pages 4-9 this Reply. In addition, the specification has been amended as indicated at pages 2-3. Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

**I. Rejection of Claim 32 Under 35 U.S.C. §102(e)**

Claim 32 stands rejected under 35 U.S.C. §102(e) as being anticipated by Paatelma (US 6,463,042 B1). Withdrawal of this rejection is respectfully requested for at least the following reasons. Paatelma does not disclose each and every element of applicant's invention as recited in the claim.

For a prior art reference to anticipate, 35 U.S.C. §102 requires that "*each and every element as set forth in the claim is found*, either expressly or inherently described, in a single prior art reference." *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949, 1950 (Fed. Cir. 1999) (quoting *Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987)).

In particular, applicant's claimed invention relates to adjusting the transmission power of different portions of a data packet to allow the transmission range of the entire data packet to have a more uniform range. Independent claim 32 recites, "means for *dynamically adjusting the transmission power level of the first portion* [of a data packet]...", and, "means for determining the transmission power levels of the first and second portion [of a data packet] *based on a desired transmission range for both the first and second portion.*" These aspects of the claimed invention allow a data packet to be transmitted at different data rates and different modulations to associate such packet with a desired transmission range. (See pg. 8, ln. 25-27; Fig. 2; Fig. 3; Fig. 4a-d).

Paatelma relates to a mobile station power saving method, wherein the Quasi-Discontinuous Transmission (Q-DTX) mode of operation is employed to reduce power consumption of a receiving wireless terminal. (See col. 2, ln. 21-27). In particular, Paatelma provides for a method of transmitting a Header portion at a higher power level than the Data

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portion, however, this is achieved by reducing the power level of the second (Data) portion, not by increasing the power level of the first (Header) portion. (See col. 4, ln. 62-65 "As was discussed above, in the Q-DTX case the Header portion of the slot is transmitted at normal power while the remainder of the slot is transmitted at a reduced power level relative to the Header portion.") (emphasis added). Accordingly, Paatelma does not disclose, teach, or suggest a "means for *dynamically adjusting the transmission power level of the first portion* [of a data packet]...". Instead, Paatelma merely teaches reducing the power level of the second portion of a data packet, and nowhere teaches or suggests adjusting the first portion.

Paatelma is silent regarding IEEE 802.11 standards as well as the possibility that different portions of a single data packet can be transmitted at different data rates. Hence, Paatelma fails to address the problem of disparate transmission ranges for different portions of a single data packet. Therefore, the reference does not disclose, teach, or suggest, "means for determining the transmission power levels of the first and second portion [of a data packet] *based on a desired transmission range* for both the first and second portion." Instead, Paatelma discloses a method of determining the transmission power level of a second portion of a data packet based on the validity of the second portion, not based upon *a desired transmission range* as is recited in the subject claim.

The Examiner contends that "based on a desired transmission range" is equivalent to "reduce the interference". Such a contention is categorically false. There are many ways to reduce the interference of a wireless communication system without affecting the desired transmission range. Paatelma is a primary example because it reduces interference (in order to reduce power consumption) by allowing a receiver to ignore some of the second portion of a data packet, not by preventing a receiver that is beyond the desired transmission range from receiving the data packet.

Again, Paatelma does not, in any way whatever, teach or suggest "means for determining the transmission power levels...based on a desired transmission range...." In fact, Paatelma inherently requires that the desired transmission range does not change. Paatelma must receive both portions of the data packet in order to determine if the power levels are different. However, if, as the Examiner mistakenly suggests, Paatelma intended to vary the desired transmission range, then a receiver might never receive the second portion of the data packet because the second portion is transmitted at a lower power, which, although not contemplated by Paatelma,

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could only reduce its range. If the Examiner's assertions were true, such a result could prevent the receiver from receiving the second portion of a data packet, even after it has received the first portion. Hence, the receiver would simply remain active, awaiting the second portion. It could not compare the respective power levels (because it never received the second portion), and the result would be an increase in interference and an increase in power consumption of the receiver, neither of which are taught in the reference. Accordingly, as stated above, Paatelma does not teach or suggest *means for dynamically adjusting the transmission power level of the first portion* [of a data packet] and *means for determining the transmission power levels of the first and second portion* [of a data packet] *based on a desired transmission range for both the first and second portion* as recited in the subject claim. Accordingly, the rejection of independent claim 32, as well as all claims that depend therefrom, should be withdrawn.

## **II. Rejection of Claims 29-31 Under 35 U.S.C. §103(a)**

Claims 29-31 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Paatelma (US 6,463,042 B1) in view of Fischer (US 5,768,695). Withdrawal of this rejection is respectfully requested for at least the following reasons. Paatelma and Fischer, either alone or in combination, fail teach or suggest all the limitations of the subject claims.

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To reject claims in an application under §103, an examiner must establish a *prima facie* case of obviousness. A *prima facie* case of obviousness is established by a showing of three basic criteria. *First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings.* Second there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) *must teach or suggest all the claim limitations.* The teaching or suggestion to make the claimed combination and the reasonable expectation of success must be found in the prior art and not based on the Applicant's disclosure. *See In re Vaack*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). An examiner cannot establish obviousness by locating references which describe various aspects of a patent applicant's invention without also *providing evidence of the motivating force which would impel one skilled in the art to do what the patent applicant has done.* *Ex parte Levengod*, 28 USPQ2d 1300 (P.T.O.B.A.&I. 1993) (emphasis added).

Applicant's claimed invention relates to a system for adjusting transmission power of different portions of a data packet. In particular, independent claim 29 recites, "the power control module receives a data packet...and dynamically adjusts the transmission power of the packet...*to facilitate transmitting the PLCP preamble and the data portion over a substantially similar transmission range*". This aspect of the claimed invention allows a data packet to achieve a substantially similar transmission range even when different portions of the data packet are propagated at different data rates.

In contrast to the claimed invention, Paatelma discloses systems and/or methods for modifying power in the body of a data packet to reduce utilization of a battery at a receiver unit. In Office Action dated March 11, 2005, the Examiner concedes that Paatelma fails to teach or suggest, "the power control module receives a data packet...and dynamically adjusts the transmission power of the packet...*to facilitate transmitting the PLCP preamble and the data portion over a substantially similar transmission range*", but contends that this element is taught Fischer. (See Office Action, pp. 3-4). Applicant's representative avers to the contrary. Fischer relates to a system for providing a flexible ramp up and ramp down of the various stages of a radio in a wireless local area network in order to prevent all stages of a radio from being

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turned on at the same time which could create frequency 'splatter', causing the radio to fail FCC requirements. In particular, Fischer relates to a method of reducing 'splatter' that is programmable in order to be implemented in various environments. To support the Examiner's assertion that Fischer makes up for the deficiencies of Paatelma, the Examiner cites Fig.1, which portrays a diagram of a PLCP frame format for IEEE 802.11 (the accompanying text does nothing more than describe such figure). Applicant's representative respectively asserts that nowhere in the document does Fischer (like Paatelma) disclose, teach, or suggest a power control module that receives a data packet...and dynamically adjusts the transmission power of the packet...*to facilitate transmitting the PLCP preamble and the data portion over a substantially similar transmission range*. It is unclear why the Examiner cites this reference, as Fischer is not concerned with transmitting data, let alone ensuring that all portions of a transmitted data packet will have a substantially similar transmission range.

Fischer fails to make up for the aforementioned deficiencies of Paatelma with respect to applicant's claimed invention. Therefore, the Examiner has failed to make a *prima facie* case of obviousness with respect to claim 29. Accordingly, the rejection of independent claim 29 as well as claims 30-31, which depend therefrom, should be withdrawn.

### III. Rejection of Claims 2-5, 7-8, 18, 20-28 and 34-35 Under 35 U.S.C. §103(a)

Claims 2-5, 7-8, 18, 20-28 and 34-35 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Paatelma (US 6,463,042 B1) in view of Hassan, *et al.* (US 6,301,231 B1). Withdrawal of this rejection is respectfully requested for at least the following reasons. Neither Paatelma nor Hassan, *et al.*, alone or in combination, teach or suggest all the claim limitations of the subject claims. Additionally, it is improper to combine Paatelma with Hassan, *et al.* because the references themselves provide neither the motivation nor any suggestion of desirability to make such a combination. Moreover, the cited art do not suggest how to solve the problem faced by the applicant at the time the invention was made. Further, it is improper to combine the references because to do so would require substantial reconstruction.

*The prior art items themselves must suggest the desirability and thus the obviousness of making the combination without the*

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*slightest recourse to the teachings of the patent or application.* Without such independent suggestion, the prior art is to be considered merely to be inviting unguided and speculative experimentation which is not the standard with which obviousness is determined. *Amgen, Inc. v. Chugai Pharmaceutical Co. Ltd.*, 927 F.2d 1200, 18 USPQ2d 1016 (Fed. Cir. 1991); *In re Laskowski*, 871 F.2d 115, 117, 10 USPQ2d 1397, 1398 (Fed. Cir. 1989); *In re Dow Chemical Co.*, 837 F.2d 469, 473, 5 USPQ2d 1529, 1532 (Fed. Cir. 1988); *Hodosh v. Black Drug*, 786 F.2d at 1143 n.5., 229 USPQ at 187 n.4.; *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1985) (emphasis added). Additionally, the suggestion to combine the references *must not require substantial reconstruction or redesign of the references to arrive at the claimed invention.* *In re Ratti*, 123 USPQ 349, 352 (CCPA 1959) (emphasis added).

Applicant's claimed invention relates to a system for adjusting transmission power of different portions of a data packet. In particular, independent claim 2 recites, "the communication unit transmits *the first portion of the data packet at a first data rate and the second portion of the data packet at a second data rate*". Independent claim 20 recites, "transmitting a first portion of the data packet at a first transmission *power level*...a second portion...at a *second power level*...and...a third portion...at a *third power level*". Independent claim 35 recites, "a data packet having a first portion transmitted at a *first power level*, a second portion transmitted at a *second power level*, and a third portion transmitted at a *third power level*". These aspects of the claimed invention allow a single data packet to achieve a substantially similar transmission range even when different portions of the data packet are propagated at different data rates, such as when utilizing IEEE 802.11 protocol. By dynamically adjusting the power levels of the various portions of a data packet when those portions have different data rates, the transmission range can be made more uniform.

As described above, Paatelma relates to reducing power usage of a receiving unit, and the Examiner concedes that Paatelma does not teach or suggest "the communication unit transmits *the first portion of the data packet at a first data rate and the second portion of the data packet at a second data rate*". (See Office Action, pp. 5-6), but asserts that Hassan, *et al.* teaches this aspect of the claimed invention. Applicant's representative disagrees with this assertion. In contrast to the claimed invention, which relates to modifying power levels with respect to disparate portions of a data packet to effectuate a desirable communications range, Hassan, *et al.*

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relates to a satellite communication system wherein an Earth-based terminal can transmit to multiple satellites if a single satellite cannot handle the data rate at which the terminal desires to transmit. In particular, Hassan, *et al.* is concerned with achieving a desired bandwidth for data (see col. 7, ln. 25-26; col. 9, ln. 27-31, col. 9, ln. 46-47) by apportioning the data among multiple satellites. The Examiner contends that Hassan, *et al.* discloses the aforementioned claim limitation by way of the following cited passage, which is provided for sake of clarity below:

The system also includes a communication controller which, in response to the reply from the first satellite, apportions the data into first and second data portions. The transmitter establishes a first communication link with the first satellite to transmit the first data portion to the first satellite at the second data rate and, while maintaining the first communication link, establishes a second communication link with the second satellite to transmit the second data portion to the second satellite at a third data rate (which, when summed with the second data rate equals the first data rate) (emphasis added).

It is respectfully submitted that the Examiner is confusing "data" with "data packet", and "data portion" with "data packet portion" in order to make this rejection. The reference does not contemplate transmitting *the first portion of the data packet at a first data rate and the second portion of the data packet at a second data rate*. Instead, Hassan, *et al.* discloses transmitting data (which is comprised of one or more data packets) to a satellite at one data rate, and the rest of the data to a second satellite at a second data rate. Therefore, while the satellite receivers may receive data at two distinct data rates, all portions of the individual data packets that comprise the data are transmitted at the same data rate. Hence, Hassan, *et al.* fails to disclose, teach, or suggest the communication unit transmits *the first portion of the data packet at a first data rate and the second portion of the data packet at a second data rate*.

Moreover, Hassan, *et al.* is silent regarding "transmitting a...portion of the data packet at a...transmission *power level*" as the applicant's claimed invention recites in independent claims 20 and 35. Nowhere in the reference is it taught or suggested to adjust the transmission power level of a portion of a data packet. Hence, Hassan, *et al.* does not teach or suggest, "transmitting a first portion of the data packet at a first transmission *power level*...a second portion...at a *second power level*...and...a third portion...at a *third power level*" or, "a data packet having a first portion transmitted at a *first power level*, a second portion transmitted at a *second power level*, and a third portion transmitted at a *third power level*".

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Therefore, Hassan, *et al.* fails to make up for the aforementioned deficiencies of Paatelma. The Examiner has failed to make a *prima facie* case of obviousness with respect to claims 2, 20, and 35. Accordingly, the rejection of independent claims 2, 20, and 35, as well as all claims that depend therefrom, should be withdrawn.

Additionally, regarding independent claims 2, 20, 29, and 35, the Examiner contends that "it would have been obvious to [one of] ordinary skill in the art at the time of the invention to combine the above teaching of Hassan, *et al.* with Paatelma, in order to provide a busy tones that indicates a base station is in an overload condition, therefore, improve the performing transmission data rate allocation of a high speed wireless communication network." (See Office Action, page 6). Paatelma relates to a mobile station power saving method in order to reduce power consumption of a receiving wireless terminal, wherein a receiver will ignore some of the data portion of a packet if it detects that the data portion is transmitted at a lower power level than the header portion. On the other hand, Hassan, *et al.* relates to a satellite communication system wherein transmitted data can be apportioned, then sent to multiple satellite receivers at different data rates if a single satellite receiver cannot handle the data rate at which the transmitter wants to transmit.

There is no teaching or suggestion in the references that providing a busy tone to indicate a base station is in an overload condition would improve the transmission data rate allocation of a high speed wireless communication network. Applicant's representative traverses the aforementioned statement and requests that the Examiner cite a reference in support of his position pursuant to MPEP § 2144.03 if the rejection of these claims is to be maintained.

Moreover, assuming *arguendo* that providing a busy tone to indicate a base station is in an overload condition would improve the transmission data rate allocation of a high speed wireless communication network, there is no suggestion that one of ordinary skill in the art would be motivated to utilize different data rates within a data packet in order to indicate this. In fact, such an assertion would be absurd because, even if providing a busy tone did serve a desired purpose, the base station could merely toggle a single bit in a data packet to indicate that it is in an overload condition, without the need to substantially modify the reference in the way the Examiner suggests (*e.g.*, modify the transmission protocol and the software and/or hardware of all base stations and all terminal receivers in order to enable different portions of a data packet to be transmitted and received at multiple data rates). Therefore, pursuant to *In re Ratti*, this is



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an improper combination of references because it would require substantial reconstruction or redesign.

Furthermore, Hassan, *et al.* "takes advantage of the fact that a plurality of satellites may be simultaneously in range of a particular terminal, and that each of the satellites can communicate at a variety of data rates." Therefore, Hassan, *et al.* provides for different data rates in order to achieve a desired bandwidth. In contrast, applicant's claimed invention may make use of different data rates in order to make the transmission range more uniform. That a reference might incorporate elements which are used in the applicant's system does not render the applicant's claims obvious *when the prior art did not teach "how to solve the problems" faced by the inventor. In re Ratti*, 270 F.2d 810, 813, 123 USPQ 349, 352 (CCPA 1959).

Moreover, Paatelma makes use of different power levels in order to notify a receiver that it should ignore the data portion. Paatelma does not utilize different power levels to make the transmission range more uniform. Secondly, Paatelma is designed to transmit the header portion of a packet at a higher power level, whereas under IEEE 802.11 standards the header portion is designed to transmit at a lower data rate than the data portion, in which case applicant's claimed invention would transmit the header portion at a lower power level than the data portion. Finally, when Paatelma utilizes different power levels the receiver ignores the data portion and shuts down. Hence, Paatelma is designed to disregard the data, and, therefore, cannot be used to transmit valid data at different power. Thus, pursuant to *In re Ratti*, this is an improper obviousness rejection because neither reference teaches how to solve the problems (*e.g.* a more uniform transmission range) faced by the applicant at the time the invention was made.

In sum, the Examiner has failed to establish a *prima facie* case for obviousness for at least the following reasons. The Examiner has failed to provide a motivation to combine the references, the Examiner has failed to show there is a suggestion of using the elements to solve the problems faced by the applicant, and, further, the combination would require substantial reconstruction or redesign. Accordingly, the rejection of claims 2, 20, 29, and 35, as well as all claims that depend therefrom, should be withdrawn.

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**IV. Rejection of Claims 6 and 9-17 Under 35 U.S.C. §103(a)**

Claims 6 and 9-17 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Paatelma (US 6,463,042 B1) in view of Hassan, *et al.* (US 6,301,231 B1) in a further view of Fischer, *et al.* (US 5,768,695). Withdrawal of this rejection is respectfully requested for at least the following reasons.

Claims 6 and 9-17 depend indirectly upon claim 2, which is believed to be in condition for allowance. Therefore, claims 6 and 9-17 are also allowable. Additionally, it is improper to combine Hassan, *et al.* with Paatelma for the aforementioned reasons. Accordingly, this rejection should be withdrawn.

**CONCLUSION**

The present application is believed to be in condition for allowance in view of the above comments and amendments. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [TELNP200US].

Should the Examiner believe a telephone interview would be helpful to expedite favorable prosecution, the Examiner is invited to contact applicant's undersigned representative at the telephone number below.

Respectfully submitted,

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